

## WHAT IS CLAIMED IS:

1. A method for forming a shallow trench, said method comprising steps of:
  - providing a substrate;
  - forming a plurality of operation layers on said substrate;
  - forming a photoresist layer on the uppermost one of the operation layers to define a position to be removed;
  - removing a portion of the operation layers at said position to form an opening;
  - forming a liner layer on the sidewall of the opening; and
  - removing a portion of the substrate corresponding to the opening.
2. The method as claimed in Claim 1, wherein the liner layer comprises dielectric material.
3. The method as claimed in Claim 2, wherein the liner layer comprises oxide material.
4. The method as claimed in Claim 3, wherein the liner layer comprises silicon oxide isolating material.
5. The method as claimed in Claim 4, wherein the liner layer comprises TEOS.
6. The method as claimed in Claim 1, wherein the liner layer is formed on the sidewall of the opening by deposition.
7. A method for forming a shallow trench, said method comprising steps of:
  - providing a substrate;
  - forming a plurality of operation layers on said substrate;
  - forming a photoresist layer on the uppermost one of the operation layers to define a position to be removed;
  - removing a portion of the uppermost one of the operation layers at said position to form an opening;
  - forming a liner layer on the sidewall of the opening;
  - removing a portion of the other ones of the operation layer corresponding to the opening; and
  - removing a portion of the substrate corresponding to the opening.
8. The method as claimed in Claim 7, wherein the liner layer comprises dielectric material.
9. The method as claimed in Claim 8, wherein the liner layer comprises nitride material.
10. The method as claimed in Claim 1, wherein the liner layer is formed on the sidewall of the opening by deposition.